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Docket Number (Optional)
SRC012

First Named Inventor: Jon M. Huppenthal et al.

Filed: August 17, 2001

Application Number: 09/932,330

Art Unit: 2182

Examiner Sorrell, Eron J.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
☐ assignee of record of the entire interest.
 See 37 CFR 3.71. Statement under
 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.
registration number 46,901

- ☐ attorney or agent acting under 37 CFR 1.34(a)
 registration number if acting under 37 CFR 1.34(a) _____

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NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*

Serial No. 09/932,330 Application of: Jon M. Huppenthal, Thomas R. Seeman, Lee A. Burton Filed: August 17, 2001 Attorney Docket No. SRC012 For: SWITCH/NETWORK ADAPTER PORT FOR CLUSTERED COMPUTERS EMPLOYING A CHAIN OF MULTI-ADAPTIVE PROCESSORS IN A DUAL IN-LINE MEMORY MODULE FORMAT	Confirmation No.: 4801 Art Unit: 2182 Examiner: Sorrell, Eron J. Customer No.: 25235
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ATTACHMENT TO PRE-APPEAL BRIEF REQUEST FOR REVIEW

MAIL STOP AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir,

In response to the Final Office Action mailed April 20, 2006 and the Advisory Action mailed July 5, 2006, Applicants request that the claim rejections be reviewed prior to the filing of an Appeal Brief for the reasons provided in the following paragraphs.

The Examiner has failed to meet the prescribed requirements of a 35 U.S.C §103 rejection. To form a *prima facie* case of obviousness under 35 U.S.C. §103 and in accord with section 2143 of the MPEP, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Second, there must be a reasonable expectation that the art suggested in the references cited by the examiner will succeed in creating the claimed invention. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The Examiner has neither shown a sufficient source of suggestion or motivation to combine the cited art nor has he shown that one skilled in the relevant art would expect the combined cited references to succeed in creating the claimed invention.

A. The Examiner fails to provide reasons why one skilled in the art at the time of the Applicants' invention would modify Foster with the teachings of O'Sullivan.

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir., 1990). According

to the Federal Circuit, this motivation may be found implicitly or explicitly: 1) in the prior art references themselves; 2) in the knowledge of those of ordinary skill in the art that certain references, or disclosures in those references, are of special interest or importance in the field; or 3) from the nature of the problem to be solved leading inventors to look to reference relating to possible solutions to that problem. See *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 57 U.S.P.Q.2d 1161 (Fed. Cir. (Mo.), 2000). To prevent the use of hindsight based on the Applicants' invention to defeat the patentability of the Applicants' invention, the Examiner must show a motivation to combine the references that create the case of obviousness. "In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed." *In re Rouffet*, 149 F.3d 1350, 47 U.S.P.Q.2d 1453 (Fed. Cir., 1998). Thus absent some teaching, suggestion or incentive supporting the proposed combination of art, obviousness cannot be established.

The Examiner asserts that it would be obvious for one of ordinary skill in the art at the time of the Applicants' invention to modify the system of Foster with the teachings of O'Sullivan. The Examiner attempts to support his assertion by stating that one skilled in the art would have been motivated to make such modifications in order to add an adapter using an existing available slot without making any hardware changes in the computer or purchasing additional equipment as suggested by O'Sullivan. Yet a careful word search of O'Sullivan reveals no such motivating statement. The Applicant therefore assumes, as no direct statement is evident, that the Examiner is relying on the high level of skill in the art at the time of the Applicants' invention. The Court in *Rouffet* stated that to "prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness." *Id.* As in the present invention, the examiner in *Rouffet* relied on the high level of skill in the art to provide the necessary motivation. Finding such motivation absent, the *Rouffet* Court stated that "if such rote invocation could suffice to supply a motivation to combine, the more sophisticated scientific fields would rarely, if ever, experience a patentable technical advance." *Id.* The Applicants' assert that the Examiner has improperly invoked such a route source of motivation.

The Federal Circuit has repeatedly warned against the use of the Applicants' invention as a blueprint by which to build a case of obviousness. The Examiner offers no

explanation of the specific understanding or principle within the knowledge of one skilled in the art that would motivate one with no knowledge of the Applicants' invention to combine the teachings of Foster and O'Sullivan to create the Applicants' invention. The cost savings and decreased hardware modifications cited by the Examiner as a reason to combine Foster and O'Sullivan are applicable to any invention and provide no reason why one would be motivated to turn to Foster and O'Sullivan to solve the problem faced by the Applicants. These reasons have no foundation for modifying a memory system that dynamically enables/disables memory paging depending on the page hit to pre-charge ratio for accesses to the memory, as disclosed by Foster, with the teaching for a hybrid communications control unit (a modem) of O'Sullivan to form system that enables direct data exchange between the external device and the memory module bus via a memory module slot.

B. Modifying Foster by the teachings of O'Sullivan fails to provide a reasonable expectation of success to produce the Applicants' claimed subject matter as a whole because neither O'Sullivan nor Foster address and solve key communication barriers between coupling an external processor directly to the memory module bus.

The Applicants' invention enables direct data exchange between an external device and the memory module bus. One of average skill in the art at the time of the Applicants' invention would not expect the combined teachings to Foster and O'Sullivan to produce such a direct data exchange. A proper analysis under 35 U.S.C. §103 includes the determination of "whether the prior art would also have revealed that in so making or carrying out, those of ordinary would have a reasonable expectation of success." *Noelle v. Lederman*, 355 F.3d 1343, 69 U.S.P.Q.2d 1508 (Fed. Cir., 2004). While an absolute expectation of success is not necessary, the combined art must provide a reasonable expectation that one skilled in the art will succeed in making the claimed subject matter as a whole. At least some degree of predictability is required. "To have a reasonable expectation of success, one must be motivated to do more than merely to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful. *Medichem, S.A. v. Rolabo, S.L.* 437 F.3d 1157, *1165 (C.A.Fed. (N.Y.),2006). Foster in view of O'Sullivan provides no indication, no direction, and no such reasonable expectation of success.

The Examiner fails to offer any suggestion that one skilled in the art would reasonably expect a modification of Foster, based on the teachings of O'Sullivan, would succeed in creating the Applicants' claimed invention. Instead the Examiner suggests in the recent advisory action that an expectation of success exists since the claims have no limitations addressing the communication barriers between coupling an external processor directly to a memory bus. The Examiner's statement belies his position. The prior art and surrounding circumstances must provide a reasonable reason to do, not a reasonable reason to try to do. Based on what has been accomplished in the art up to the time of the invention, and specifically what is suggested and taught in Foster and O'Sullivan, there is no suggestion of a direction on how to proceed to produce the Applicants' invention. The combination itself is novel, and a limitation overcoming the communication barriers between a memory bus and an external device, while solved by the Applicants, is not necessary for patentability. Countless objective pieces of evidence exist supporting the computing industries goal to increase computing speed, efficiency, and bandwidth. Advancements in computing hardware have progressed to a point where the bandwidth and speed of computing is soon to be limited by the speed of light. In such an environment, even a 10% increase in computing capability is heralded as a major achievement. The Applicants' invention, which the Examiner asserts is obvious by the teachings of Foster and O'Sullivan, advances data transfer rates associated with an external interface from 256Kb/sec as taught by O'Sullivan to more than 3.1 Gb/sec representing a 1100% increase in computing capability. One skilled in the art at the time of the Applicants' invention would not reasonably expect that modifying Foster by the teachings of O'Sullivan would produce such a result.

C. Each and every element of the claimed invention is not disclosed in the combined references, namely Foster and O'Sullivan.

The Applicants further reiterate, and incorporate by reference, their argument that O'Sullivan does not disclose a processing element providing a "direct" connection between the external device and the memory module slot. The Examiner asserts that "Figure 4 shows communication from external devices passing through the microprocessor to the interface then on to the computer." O'Sullivan remarks in Column 8, beginning at line 24, that "The computer interface 78 is preferably of the type that converse directly with a central logic bus of the portable computer 90...." The Applicants' invention connects an external device having processor directly to the memory bus to exchange data directly

between the external device and the memory bus. As shown in Figure 5 of the Applicants' specification, there is no computer interface placed between the processor and the memory bus (computer).

Assuming for argument's sake that O'Sullivan suggests connecting an external device to a memory expansion slot, O'Sullivan nonetheless fails to suggest that the connection enables data from the external device to be exchanged directly to the memory bus. The interface that O'Sullivan describes is ideally an asynchronous receiver that communicates to the central logic bus. While O'Sullivan does not further define a central logic bus, O'Sullivan describes communications between a hybrid communications card consistent with that conducted on a peripheral communication interface (PCI) bus and not directly with the memory bus.

D. Conclusion

The Examiner fails to show proper motivation for combining Foster and O'Sullivan and fails to show that one skilled in the art would have a reasonable expectation of success in creating the Applicants' invention by combining the teachings of Foster and O'Sullivan. The Examiner has failed to support a prima facie case of obviousness in clear error of the MPEP. In view of the above, Applicants respectfully request that a review panel review the Examiner's rejections and produce a finding that there are no actual issues remaining for appeal and that the application is allowed.

A check is provided for the fee associated with a filing of a Notice of Appeal. Additionally, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

July 20, 2009



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